

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Soyeon (Karen) Pak Laub on 2/11/09.
3. The application has been amended as follows:

Amendments to the Claims

4. Please cancel claims 14, 25, and 35.
5. Please amend claims 12, 13, 23, 24, 33 and 34 as follows:

Claim 12 (Currently Amended): A process for upgrading
firmware in a thin client comprising:

booting up the thin client; and

automatically launching a firmware upgrade loader
program in the thin client without operator intervention
during the booting up that:

reads an address of an FTP server from a memory within
the thin client;

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sends an FTP request for a firmware upgrade from the thin client to the FTP server at the address that was read;

receives the firmware upgrade in response at the thin client from the FTP server; ~~and~~

upgrades the firmware in the thin client with the firmware upgrade;

reads an address of a second FTP server from a memory within the thin client that is different from the address of the FTP server;

sends an FTP request for a second firmware upgrade from the thin client to the second FTP server at the address of the second FTP server that was read;

receives the second firmware upgrade in response at the thin client from the second FTP server; and

upgrades the firmware in the thin client with the second firmware upgrade.

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Claim 13 (Currently Amended): The process of claim 12, further comprising re-booting the thin client after the firmware is upgraded with the second firmware upgrade.

Claim 23 (Currently Amended): A system for upgrading firmware in a thin client comprising:

storage media containing computer programming instructions for loading during boot up of the thin client and for implementing the following tasks when the instructions are performed by a processing system in communication with a network interface:

reading an address of an FTP server from a memory within the thin client;

sending an FTP request for a firmware upgrade from the thin client to the FTP server at the address that was read;

receiving the firmware upgrade in response at the thin client from the FTP server; ~~and~~

upgrading the firmware in the thin client with the firmware upgrade;

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reading an address of a second FTP server from a memory within the thin client that is different from the address of the FTP server;

sending an FTP request for a second firmware upgrade from the thin client to the second FTP server at the address of the second FTP server that was read;

receiving the second firmware upgrade in response at the thin client from the second FTP server; and

upgrading the firmware in the thin client with the second firmware upgrade;

a network interface; and

a processing system configured to communicate with the storage media and the network interface, to boot up the thin client, and to perform the programming instructions during the boot up.

Claim 24 (Currently Amended): The system of claim [[21]]23, wherein the tasks further include: directing re-

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booting of the thin client after the firmware is upgraded
with the second firmware upgrade.

Claim 33 (Currently Amended): Computer-readable storage media containing computer programming instructions for loading during boot up of the thin client and for implementing the following tasks when the instructions are performed by a processing system in communication with a network interface:

reading an address of an FTP server from a memory within the thin client;

sending an FTP request for a firmware upgrade from the thin client to the FTP server at the address that was read;

receiving the firmware upgrade in response at the thin client from the FTP server; and

upgrading the firmware in the thin client with the firmware upgrade;

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reading an address of a second FTP server from a memory within the thin client that is different from the address of the FTP server;

sending an FTP request for a second firmware upgrade from the thin client to the second FTP server at the address of the second FTP server that was read;

receiving the second firmware upgrade in response at the thin client from the second FTP server; and

upgrading the firmware in the thin client with the second firmware upgrade.

Claim 34 (Currently Amended): The computer-readable storage media of claim 33, wherein the tasks further include: directing the re-booting of the thin client after the firmware is upgraded with the second firmware upgrade.

Amendments to the Specification

6. Please restore the title back to original title as follows:

--Automatic firmware upgrade for thin clients using multiple FTP servers and locally-stored FTP addresses--

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Note: The title was amended on 7/29/2008, which was broader as compared to the original title for the claimed invention.

Preliminary Amendments

7. The applicant's preliminary amendments dated 7/29/2008 are acknowledged.

Drawings

8. The drawings filed on 4/20/04 are acknowledged.

Allowable Subject Matter

9. Claims 12, 13, 23, 24, 33 and 34 are allowed.
10. The following is an examiner's statement of reasons for allowance:

Applicant's invention discloses a process, a system and a computer readable storage media for upgrading firmware in a thin client. During booting up the thin client, a firmware upgrade loader program in the thin client is launched automatically without operator intervention. The loader program reads an address of an FTP server from a memory within the thin client, sends an FTP request for a firmware upgrade from the thin client to the FTP server at the address that was read, receives the firmware upgrade in response at the thin client from the FTP server, upgrades the firmware in the thin client with the firmware upgrade, reads an address of a second FTP server from a memory within the thin client that is different from the address of the FTP server, sends an FTP request for a second firmware upgrade from the thin client to the second FTP server at the address of the second FTP server that was read, receives the second

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firmware upgrade in response at the thin client from the second FTP server; and upgrades the firmware in the thin client with the second firmware upgrade.

The prior arts, i.e., Kao et al., 2004/0073902, page 2; Parry et al., 2004/0054762, pages 4, 5; Heisey et al., 2004/0015940, pages 2, 3 ; Criss et al., 2006/0002340, paragraphs 45, 48, 93; Bhargava et al., 2008/0005293, page 1; Pieper et al., 2004/0088680, page 2; Lombardo et al., 6,341,290, cols 3,4; Zhang, 6,889,251, cols., 1,2 discloses usage of multiple FTP server for a firmware upgrade in the thin client. However, the prior arts do not disclose or suggest during booting up the thin client, a firmware upgrade loader program in the thin client is launched automatically without operator intervention that utilizes multiple FTP servers by the loader program to accomplish the above mentioned process steps. Therefore, the claims are allowable over the art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (571) 272-3973. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached at (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Haresh N. Patel/

Primary Examiner, Art Unit 2454

2/11/09